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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,685	11/29/2001	Shiying Zheng	A34673-065838.0318	7351

7590

07/21/2003

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EXAMINER

GILLIAM, BARBARA LEE

ART UNIT

PAPER NUMBER

1752

8

DATE MAILED: 07/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/998,685

Applicant(s)

ZHENG ET AL.

Examiner

Barbara Gilliam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-28 and 31 is/are allowed.
- 6) ☒ Claim(s) 1-13, 29 and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Specification

1. The use of the trademark CREO TRENDSETTER has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claims

2. Claims 1-31 are present.
3. Please note claim 11 further limits the A of structure VIb in claim 10 without requiring the presence of A.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-13, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zheng et al. in view of Gardner, Jr. et al.

a. In US 5,985,514, Zheng et al. teach an imaging member composed of a hydrophilic imaging layer having a hydrophilic heat-sensitive polymer containing heat-activatable thiosulfate groups and optionally a photothermal conversion material. Upon application of energy that generates heat, such as from IR irradiation, the polymer is crosslinked and rendered more hydrophobic (abstract). The heat-activatable thiosulfate group represented by structure I is identical to the thiosulfate group of present structure VIa (claim 1; column 4, lines 49-60). In structure I, when X is an arylene group, the heat-activatable thiosulfate group meets the present limitations for the thiosulfate group of structure VIb (claim 2). The heat-activatable groups comprise from about 10 to 100 mol% of all recurring units in the heat sensitive polymer (claim 10). The heat sensitive polymer has a molecular weight of at least 1,000 and preferably of at least 5,000 (column 4, lines 33-36). The polymers comprising the thiosulfate groups can be polymerized with one or more other ethylenically unsaturated polymerizable monomers such as acrylates, methacrylates, styrenes and acrylamides (column 9, lines 14-22). The amount of the heat-sensitive polymer(s) used in the imaging layer is at least 0.1 g/m² and preferably from about 0.1 to about 10 g/m² which gives an average dry thickness of from about 0.1 to about 10 μ m (column 10, lines 4-9). The photothermal conversion material can be infrared absorbing dyes such as IR Dye 6, which is identical to compound I of present claim 6. The imaging layer of Zheng et al. meets the present limitations for the coating composition. In Zheng et al., the imaging member preferably has only one layer that is the heat sensitive layer required for imaging (column 4, lines 18-20). There is no teaching of a water soluble topcoat as required in the present application. However, the Examiner asserts it would have been obvious to one of

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ordinary skill in the art to use a topcoat layer that is not imageable based on the teachings of Gardner, Jr. et al.

b. In US 5,506,090, Gardner, Jr. et al. teach a process for making shoot and run printing plates having a protective top coat layer which can be water-soluble. The protective top coat layer may provide the printing plate with protection from contamination during handling, improved suppression of odors during imaging and improved roll-up performance on press (abstract). Polymers useful in the preparation of top coats include polyacrylamide and polyvinylpyrrolidone (column 7, line 66 – column 8, line 18). The water soluble top is capable of being removed after exposure on press by action of the fountain solution and/or the action of the press (column 7, lines 56-63).

c. Therefore it would have been obvious to one of ordinary skill in the art to coat the imaging element of Zheng et al. with a water soluble protective top coat to provide the imaging element with protection from contamination during handling, improved suppression of odors during imaging and improved roll-up performance on press based on the teachings of Zheng et al. wherein the imaging element comprises a support and a hydrophilic imaging layer containing a hydrophilic heat-sensitive polymer containing heat-activatable thiosulfate groups and a photothermal conversion material.

Allowable Subject Matter

6. Claims 14-28 and 31 are allowed.

7. The following is an examiner's statement of reasons for allowance:

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a. The imaging layer of Zheng et al. can contain one or more conventional surfactants for coatability, dye or colorants for visualization or any other conventional addenda (column 10, lines 10-15), however there is no teaching or suggestion to specifically incorporate a diazonium, iodonium, copper (I), alkoxypyridinium or maleimide additive as required in present claims 14-28 and 31.

b. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. In US 2003/0113653 A1, Zheng et al. teach an imaging member containing latex polymer-carbon black composite particles and method of imaging and printing (abstract).

b. In US 6,558,875 B1, Toshimitsu et al. teach a method for treating photosensitive lithographic printing plate.

c. In US 6,413,694 B1, Zheng et al. teach processless imaging member containing heat sensitive sulfonate polymer and methods of use.

d. In US 6,410,202 B1, Fleming et al. teach thermal switchable composition and imaging member containing cationic IR dye and method of imaging and printing.

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e. In EP 703 499 A1, Gardner, Jr. et al. Teach top coats for shoot and run printing plates.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barbara Gilliam whose telephone number is 703-305-1330. The examiner can normally be reached on Monday through Friday, 8:00 AM - 6:00 PM.

a. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Baxter can be reached on 703-308-2303. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

b. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Barbara Gilliam

Barbara Gilliam
Examiner
Art Unit 1752

bg
July 16, 2003